

We claim:

1. An intake manifold for mixing and supplying air and exhaust gas recirculation (EGR) to an internal combustion engine, the manifold comprising:

- a housing for attaching to a side of an engine, the housing having a first outer wall forming one side of the manifold and having a second outer wall spaced apart from the first outer wall and forming an opposite side of the manifold;
- an air intake port projecting from the first outer wall;
- an EGR valve chamber extending between the first and second outer walls, a selected one of the first and second walls having a valve opening formed therein;
- an EGR valve assembly inserted through the valve opening and into the valve chamber through said selected wall; and
- an EGR inlet chamber extending between the first and second walls, said selected wall having an EGR supply opening formed therein; and
- an EGR supply conduit connected to the inlet chamber through the supply opening in the selected wall, the EGR valve assembly and the EGR supply conduit thereby being mountable on a wall which is the same as or opposite to the first wall from which projects the intake port.

2. The intake manifold of claim 1, wherein:

- the EGR inlet chamber is located equidistant from fore-and-aft ends of the manifold.

3. The intake manifold of claim 2, wherein the manifold comprises:

- a pair of spaced apart EGR valve chambers, each extending between the first and second outer walls, a selected one of the first and second walls having a corresponding pair of valve opening formed therein; and
- a pair of EGR valve assemblies, each valve assembly being inserted through a corresponding one of the valve openings and into the corresponding valve chamber through said selected wall, the EGR valve chambers being spaced equidistant from a fore-and-aft extending centerline of the engine manifold.

4. The intake manifold of claim 1, wherein the manifold comprises:

- a pair of spaced apart EGR valve chambers, each extending between the first and second outer walls, a selected one of the first and second walls having a

corresponding pair of valve opening formed therein; and

a pair of EGR valve assemblies, each valve assembly being inserted through a corresponding one of the valve openings and into the corresponding valve chamber through said selected wall, the EGR valve chambers being spaced equidistant from a fore-and-aft extending centerline of the engine manifold.